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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,206	07/24/2003	Harry Israel Ringermacher	120631-1	4236
6/147 7590 03/31/2008 GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309				
EXAMINER VERBITSKY, GAIL KAPLAN				
ART UNIT 2855		PAPER NUMBER		
NOTIFICATION DATE 03/31/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/627,206

Applicant(s)

RINGERMACHER ET AL.

Examiner

Gail Verbitsky

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-22, 28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22, 28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date 01/03/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-20, 30 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Front Flash thermal imaging characterization of continuous fiber ceramic composites. Article by Deemer et al. Jan, 25, 1999 [hereinafter Article 1] in view of Dennewitz (U.S. 3675074)

Article 1 discloses in Fig. 1 a thermography IR imaging device wherein a thermal pulse is applied with a photographic flash lamps heating an object/ sample, an IR camera configured to capture plurality of images/ frames, a shutter electronics (logic control) including: dual timing, TTL and Flash bank (actively quenching means) configured to shut the flash lamps and thus, to actively cool them. It is inherent, that the lamps are **off** for some period of time, and **on** for some (other) period/ duration of time.

Although it is known in the art that any device should have an initial control to initiate an action (i.e., power on/ off), Article 1 does not explicitly teach a control signal T2, in combination with the remaining limitations of claims 15-20 and 24. Article 1 does not explicitly teach to quench the lamp so as to control the lamp duration.

Dennewitz discloses in Fig. 1 a device operating as a timing controller/ timing generator to control duration of a flash lamp, the device comprising a first time/timer and

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a second time/ timer, the first time (T0) controlling an operating mode (control operating mode duration) of a (illuminating) lamp, and the second time (T2) controlling a cooling mode (control) the lamp. There is a power switching means/ device/ Schmitt trigger for providing power, and thus, inherently, voltage/ current to the lamp during the operating mode and removing power from the lamp during cooling mode. Power is applied to the lamp and the first timer of the timing controller is initialized and the lamp is at its operating mode. The switching device is, inherently, controlled by a control circuit (drive) and supplies a lamp trigger signal (T1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the logic control, disclosed by Article, so as to have a cyclic heating and cooling control of the flash lamp), as taught by Dennewitz, so as to prevent the lamp overheating and provide a proper operation so as to prolong the lamp's life, as very well known in the art.

Claims 21-22 and 28 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Article 1 and Dennewitz as applied to claims 15-20 and 24 above, and further in view of INTEGRATED GATE-COMMUTATED THYRISTORS. Article by Carroll et al. [hereinafter Article 11]

Article 1 and Dennewitz disclose the device as stated above in paragraph 2.

They do not explicitly teach that the switch is a power semiconductor switch/ an insulated gate bipolar transistor.

Article 11 teaches to use a power semiconductor switch such as IGCT or MOSFET or IGBT since they have very good performance in power and temperature cycling.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the switching device disclosed by Article 1 and Dennewitz with a switching device, as taught by Article 11, because power semiconductors known as IGCT have high speed and reliability, as already suggested by Article 11, and thus high performance ensuring a high accuracy of cooling the illuminating device.

Response to Arguments

Applicant's arguments, filed 01/07/2008, with respect to the rejection(s) of mailed on October 05, 2008 have been fully considered but they are not persuasive.

Applicant states that Dennewitz does not teach a timing generator to supply a control signal (quenching control). This argument is not persuasive because, according to the **title** of the invention, Dennewitz teaches a transistorized (control/ timing) quenching arrangement for a duration controlled flash tube/ lamp. This would imply that the transistor is acting as a timing control (T2) to control duration of the quench. Please note, that applicant has never claimed the particular timing generator; therefore, the transistors performing the function of control of the duration are considered to be the timing generator.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gail Verbitsky whose telephone number is 571/ 272-2253. The examiner can normally be reached on 7:30 to 4:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571/ 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ina et al. U.S. 2002008111A1 teach in paragraph [0028] quenching a flash or timing the flash (control flash duration).

Yamada U.S. 4021698 teaches quenching a flash to watch (control) the flash duration.

Adams et al. U.S. 4831410 teach quenching a flash to control flash duration.

EP 000773469A1 teach automatically quenching a flash to control the flash duration.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

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Primary Patent Examiner, TC 2800

March 21, 2008

/Gail Verbitsky/

Primary Examiner, Art Unit 2855